Giant Cornu Cutaneum Superimposed on Basal Cell Carcinoma

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ABSTRACT

Cornu cutaneum (CC) is a clinical term that describes the horn-like keratotic lesions extending vertically from the skin. Benign, premalignant or malignant lesions may be present at the base of CC. Seborrhoeic keratosis and squamous cell carcinoma (SCC) are the most commonly reported benign and malignant forms, respectively. Basal cell carcinoma (BCC) at the base is rare. Here, we report on an 85-year old female patient having multiple CC lesions, one being giant on her face and two of the lesions diagnosed with BCC at the base. This case is of significance due to the presence of giant and multiple CC and detection of BCC at the base of more than one lesion. This present case indicates the need for the treatment of possible malignant lesions underlying CC in the elderly by total surgical excision.

Keywords: Basal cell carcinoma, cornu cutaneum, cutaneous horn, giant

Cuernos Cutáneos Gigantes Sobrepuestos al Carcinoma de Células Basales

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RESUMEN

Cuerno cutáneo (CC), también conocido por su expresión latina "Cornu cutaneum", es un término clínico que describe lesiones queratósicas que se levantan verticalmente desde la piel, y que tienen el aspecto del cuerno de un animal. Las lesiones benignas, premalignas o malignas pueden estar presentes en la base del CC. La queratosis seborreica (QS) y el carcinoma de células escamosas (CCE) son las más formas benignas y malignas respectivamente, más comúnmente reportadas. El carcinoma de células basales (CCB) en la base es raro. Aquí reportamos el caso de una paciente de 85 años con múltiples lesiones de CC: una gigante en la cara, y dos diagnosticadas con CCB en la base. Este caso resulta importante debido a la presencia de múltiples CC, incluido uno gigante, y la detección de CCB en la base de más de una lesión. Asimismo, el caso indica la necesidad de tratar posibles lesiones malignas subyacentes en CC de ancianos mediante escisión quirúrgica total.

Palabras claves: Cornu cutaneum, cuerno cutáneo, carcinoma de células basales, gigante

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INTRODUCTION

Cornu cutaneum (CC) is a conical or cylindrical hyperkeratotic protrusion consisting of keratin that is superimposed on the skin surface and firmly adhered to each other (1). Benign, premalignant or malignant lesions may be present at the base of CC. Seborrhoeic keratosis and squamous cell carcinoma (SCC) are the most commonly reported benign and malignant forms, respectively (2). Here we report on an 85-year old female patient having multiple CC lesions, one being giant on her face and two of the lesions diagnosed with basal cell carcinoma (BCC) at the base.

CASE REPORT

An 85-year old female patient was admitted to our polyclinics for a horn-like mass extending from the right cheek toward the chin. According to her history, the lesion appeared three years ago and had grown bigger gradually and then half of it spontaneously broke off which then began to grow again since last year and has undergone its final version. The patient had horn-like lesions also under her right eye, on her right eyebrow and on her left cheek (Fig. 1)

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Fig. 1: Giant and multiple cornu cutaneum on the face.

She said that the lesions were older than six months but could not give clear information about the onset. The brown-eyed patient with skin type of Fitzpatrick Type 3 has worked in the sun for long hours as a farmer for many years. Her dermatological examination revealed a yellowish coloured cylindrical mass about 2 x 2 cm in diameter and 6 cm long, flat, soft base with a hard end portion protruding from her right cheek toward her chin. In addition, there were keratotic plaque lesions, under the right eye with a diameter of 1.5 x 1.8 x 2 cm, on the right eyebrow with a diameter of 0.3 x 0.3 x 0.5 and on the left cheek above the zygoma with a diameter of 0.3 x 0.3 x 0.5 cm. She had brown-black hypertrophic actinic keratoses on the nose, cheeks, forehead, neck and upper part of the chest as well as on the arms and hands for more than 10 years. Her cervical, submandibular and submental lymph node examinations on both sides were normal. The patient's lesions were totally excised and histopathological examination was performed. The base of the giant CC was evaluated as nodular type BCC (Fig. 2), the base of the lesion on the same side under the eye was evaluated as mixed type (nodular and infiltrative) BCC (Fig. 3) and the base of the lesions present on the left cheek and right eyebrow were evaluated as actinic keratosis. There was no tumour in the surgical margins and the patient had no recurrence during a six-month follow-up period.

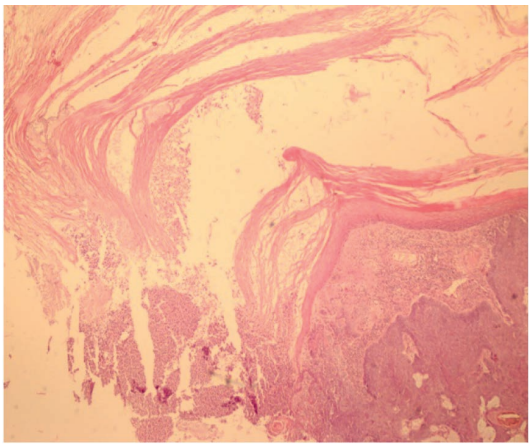

Fig. 2: Nodular type basal cell carcinoma and marked hyperkeratosis at the base of giant cornu cutaneum (HE x 4).

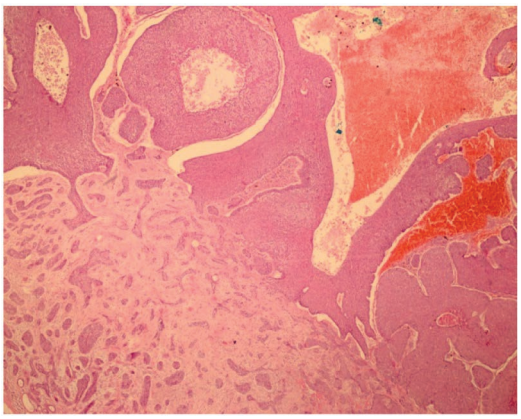

Fig. 3: Nodular and infiltrative type basal cell carcinoma at the base of lesion under the right eye (HE x 4).

DISCUSSION

Cornu cutaneum is a term that defines hyperkeratotic skin lesions extending vertically from the skin surface either in the shape of a pyramid or cylinder with a yellow-brown colour, which may be between a few millimetres and centimetres in length. Lesions are more common among the inhabitants of sunny regions, the elderly and fair-skinned people (1). Cornu cutaneum localizes most commonly to the face, scalp and ears, lips, neck, shoulders and back of the hands (2). Human papillomavirus (HPV) infection and sun have been considered as aetiologic agents. The finding that lesions can be seen in the genital areas and in the African community supports the role of HPV infection (5). Cornu cutaneum is generally seen as a single lesion. The length of the lesion is often less than 1 cm, resulting from the rupture of the extending lesion due to trauma or surgical removal to avoid further elongation for aesthetic disturbance (4).

Cornu cutaneum is just a morphological definition and the lesion may be benign, premalignant and malignant. Lesions that are reported to be at the base are as follows: seborrhoeic keratosis, histiocytoma, molluscum contagiosum, warts, sebaceous adenoma, keratoacanthoma, hemangioma, leukoplakia, actinic keratosis, Bowen's disease, SCC, BCC, Kaposi's sarcoma and sebaceous carcinoma (3). Squamous cell carcinoma remains the most common malignant lesion reported at the base of CC. Although BCC is one of the most common malignant lesions at the base of CC according to classical sources, a detailed scan of the literature shows that case reports regarding this point is not so common. There are less than 10 case reports written in English.

In a study investigating 48 CC on eyelids (7), 39 of the patients had single, three had multiple lesions and the rate of premalingnant lesions and malignancy was evaluated as

23.1%. Basal cell carcinoma and SCC were determined as malignant lesions each in two cases; one of the two BCC cases had multiple, whereas the other had single lesions.

Cornu cutaneum was bigger than 2 cm only in one case which was stated to be SCC. In this study by Mencia-Gutierrez *et al,* five patients (10.4%) with actinic keratosis were observed (7). In another study focussing on 222 CC lesions regardless of their location, a total of 16 (1 BCC and 15 SCC) lesions (7.21%) were found to be malignant. Multiple lesions were obeserved in 12 of 211 patients enrolled in this study (6). In another large-scale study, the overall rate of premalignant and malignant lesions in a total of 643 CC lesions was reported as 38.9%. The frequency of premalignant lesions was 23.2%, while the frequency of malignancy (n = 101) was 15.7% and all malignant lesions were found to be SCC (1). In a study conducted in Turkey with 11 cases of CC, eight lesions were found to be benign, two were SCC and one was BCC (8).

According to various reported sources, male gender, older age, presence of sensitivity at the base of the lesion, wide base or low height-to-base ratio, location on nose, ears, scalp, hands and forearm increase the likelihood of premalignant or malignant lesions (1). The presence of large base lesions on sun-exposed areas as well as the advanced age of our patient alerted us to the possibility of actinic keratosis and/or malignancy at the base. Large number of actinic keratoses on the face and neck suggested that there may be SCC deriving from actinic keratosis at the base of CC lesions. However, histopathological examination revealed the presence of BCC in two lesions. This situation reflects the difficulty in assessing lesion located at the base of CC by clinical examination.

A recent study shows that dermoscopic examination may help to distinguish whether the lesions at the base are benign or SCC. The presence of erythema due to increased blood flow at the base supported SCC, whereas the terrace shaped cross-stratification at the sides of the body of the horn and the parallel sequence of dead keratin were in favour of the benign lesion. The probability of terrace-like appearance is low in malignant lesions because of the rapid and unregulated growth (9). The sensitivity of the lesion during palpation and the height being smaller than the diameter of the base suggest SCC. None of these findings alone is sufficient for the diagnosis of SCC; however, their co-presence significantly increases the likelihood of SCC (9).

Our patient was admitted not because of her sensitivity and pain complaints but because of the appearance of the biggest lesion. Although no dermoscopic examination was performed, the easy evaluation of the giant lesion with the naked eye showed a compact layer in the form of a terrace or balcony alongside the body. The body length of the giant lesion was three times the diameter of the base. All these findings were in favour of a benign lesion rather than SCC. Therefore, the above mentioned criteria cannot be applicaple to every malignant lesion but mainly to SCC. Because BCC grows slowly, keratin layers are piled on top of each other in regular order like in benign lesions.

As a result, our case is interesting in terms of the presence of multiple and giant CC and detection of BCC at the base of multiple lesions. The present case draws attention to the importance of evaluating the possible malignant lesions underlying CC in elderly patients and represents a good example for the treatment by total surgical excision under safe limits of 3–5 mm.

REFERENCES

1. Yu RCH, Pryce DW, Macfarlane AW, Stewart TW. A histopathological study of 643 cutaneous horns. Br J Dermatol 1991; **124:** 449–52.
2. Fernandes NF, Sinha S, Lambert WC, Schwartz RA. Cutaneous horn: a potentially malignant entity. Acta Dermatovenerol Alp Panonica Adriat 2009; **18:** 189–93.
3. Yeşilova Y, Soylu S, Bakir Ş, Yavuz C. Giant cornu cutaneum. Turkderm 2010; **44:** 232–4.
4. Pinto-Almeida T, Oliveira A, da Cunha Velho G, Alves R, Caetano M, Selores M. Giant cutaneous horn on the lower lip. Dermatol Online J 2011; **17:** 10.
5. Leppard W, Loungani R, Saylors B, Delaney K. Mytology to reality: case report on a giant cutaneous horn of the scalp in an African American female. J Plast Reconstr Aesthet Surg 2014; **67:** 22–4.
6. Mantese SA, Diogo PM, Rocha A, Berbert AL, Ferreira AK, Ferreira TC. Cutaneous horn: a retrospective histopathological study of 222 cases. An Bras Dermatol 2010; **85:** 157–63.
7. Mencia-Gutierrez E, Gutierrez-Diaz E, Redondo-Marcos I, Ricoy JR, Garcia-Torre JP. Cutaneous horns of the eyelid: a clinicopathological study of 48 cases. J Cutan Pathol 2004; **31:** 539–43.
8. Copcu E, Sivrioglu N, Culhaci N. Cutaneous horns: are these lesions as innocent as they seem to be? World J Surg Oncol 2004; **2:** 18.
9. Pyne J, Sapkota D, Wong JC. Cutaneous horns: clues to invasive squamous cell carcinoma being present in the horn base. Dermatol Pract Concept 2013; **3:** 3–7.